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Martina Locher and Emmanuel Sulle

Abstract

Since international awareness of a global rush for land has grown from 2008 onward, various databases and reports have attempted to provide an overview of the situation by compiling information on individual land deals. While providing such an overview is challenging owing to the dynamic and untransparent nature of the investments, flawed methods of using and citing data are aggravating that challenge and allowing dissemination of inaccurate information. The consequences are an unnecessarily blurred picture of the land deal situation and thus an inadequate basis for related political decisions or social actions and a misleading starting point for new research projects. In this article we demonstrate some of the flaws in the use of data and their consequences with examples from fieldwork and literature on Tanzania. The paper illustrates and contributes to the evolving debate on appropriate research methodologies for studying the global land rush.

Keywords

land deals; land grab; databases; aggregated data; methodological flaws; Tanzania

Introduction

Acquisitions of land by foreign and, to a lesser extent, domestic investors for agricultural purposes have increased rapidly in the last few years, particularly in countries in the global South. This phenomenon, often referred to as 'land grabbing' (for a discussion of this term see Hall 2011a, ILC 2011) or 'the global land rush' (e.g. Li 2012, Scoones *et al.* 2013a), has been the subject of intense research and debate since around 2008. Relevant literature comprises numerous articles and special issues in academic journals, reports by research institutions and activist groups and multitudinous conference papers[1]. Thus, in the wake of the recent land rush, a 'literature rush' (Oya 2013) has emerged. Besides in-depth case studies and thematic analyses[2], the burgeoning literature includes several reports and databases that intend to give an overview of the land rush by providing compilations of land deals. Such compilations are produced by scholars and non-academic institutions, such as NGOs and international agencies. They exist both on a global scale (von Braun and Meinzen-Dick 2009, Deininger and Byerlee 2011, GRAIN 2012, Land Matrix 2014) and for specific countries (e.g. for Tanzania see Kamanga 2008, Songela and Maclean 2008, Bengesi *et al.* 2009, Mwamila *et al.* 2009, Sulle and Nelson 2009, Oakland Institute 2011a). These more numerical representations of the land rush are increasingly criticised and questioned in a scholary debate. Critical voices express an urgent need to address issues around the way in which data on land deals are collected and reported. The discussion on 'one of the most complicated and debated issues in global land grabbing today' (Edelman et al. 2013, 1529, note 3) is taking place informally on blogs (Bräutigam 2013b, Collin 2013a, 2013b), but recently also in academic publications such as Bräutigam and Zhang (2013), Edelman *et al.* (2013), the 'JPS Forum on Global Land Grabbing Part 2: on methods', and related commentaries to the latter (e.g. Rulli and D'Odorico 2013, Scoones *et al.* 2013b).

Edelman (2013) and Oya (2013), for example, direct strong criticism at existing research practices. Oya highlights the representation of 'false precision' in well-known databases, where 'sources and reports of unknown reliability are opportunistically combined' (Oya 2013, 506, referring to Reddy and Pogge 2005, 4). Edelman (2013, 497, referring to Bräutigam 2013a) describes a 'process of "solidification" and fact creation', which takes place when 'preliminary, anecdotal, unverified and moribund cases' (Edelman 2013, 497) are included in databases. From there, despite disclaimers about the shaky quality, data are being spread in a

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[1] See for example a collection of articles in the Journal of Peasant Studies (JPS Forum on Global Land Grabbing Part 1, Borras *et al.* 2011) and numerous special issues in the JPS and other journals; the Global Commercial Pressures on Land Research Project (Anseeuw *et al.* 2012a); several reports by the International Institute for Environment and Development (IIED) (Cotula *et al.* 2009, Cotula and Vermeulen 2009, Cotula 2011), by the Oakland Institute (Daniel and Mittal 2009), and by the NGO GRAIN (GRAIN 2008, 2010), and conference papers of two international conferences, namely the LDPI (Land Deal Politics Initiative) Global Land Grabbing Conference I at University of Sussex in 2011 and the LDPI Global Land Grabbing Conference II at Cornell University in 2012.

[2] In-depth case studies include e.g. Schoneveld *et al.* 2011; thematic analyses are provided, amongst others, by Margulis *et al.* 2013 and Wolford *et al.* 2013 on governance, Fairhead *et al.* 2012 on 'green grabs', Behrman *et al.* 2012 on gender, Locher *et al.* 2012 on initiatives to regulate the phenomenon.

'circularity of referencing' (Scoones *et al.* 2013a, 475). Bräutigam and Zhang (2013, 1680) observed for the reporting on Chinese land deals that 'the nature of circulation is such that the first papers written on the initial analysis of (problematic) data often have much greater impact than papers written later, with revised and better data'. Some problems are also related to the various and sometimes vague definitions of 'land grab' or 'land deal' (Borras *et al.* 2012a, Cotula 2012, 652, Scoones *et al.* 2013a). As a consequence, 'non-equivalent data [are] aggregated because we are not agreed on what is being counted' (Scoones *et al.* 2013a, 475). Lastly, Evers (2012), Edelman (2013) and Oya (2013) discuss underlying methodological and epistemological issues, such as researchers' basic assumptions, preconceptions and ideological biases as well as their positionality and intentions that influence what they see and how they interpret it (for an example of a clearly expressed political agenda see GRAIN 2013). All of this contributes to biased data that are characterized by questionable accuracy and reliability.

In Tanzania, the picture of the land deal situation is incomplete and, we argue, distorted. The reasons for this are various. First, the phenomenon is by its nature dynamic. For instance, a number of investing companies are being driven out of business (particularly biofuel investors, see Hultman *et al.* 2012, Locher and Sulle 2013). Other companies are sold to new owners and change their names (Chachage 2012, Locher and Sulle 2013). Second, the exploration of the global land rush is hindered by opaque practices on the part of the investors and the reluctance or inability of involved parties, including the host government, to provide information (GRAIN 2010, Cotula 2011, Deininger and Byerlee 2011, 145, Cotula 2012, for Tanzania see Mwami and Kamata 2011, TNRF/REPOA/IIED 2012). Lastly and importantly, as we argue in this paper in line with the ongoing debate, researchers sometimes use questionable methods when documenting and reproducing data on land acquisitions.

The resulting lack of clear data is reflected, for example, in the Land Matrix Global Observatory, the widely cited online global database of large-scale land acquisitions (Anseeuw *et al.* 2013, Land Matrix 2014). The Land Matrix draws on data from several sources including other Internet portals (ILC 2013, GRAIN 2014). It is used as basis for scientific articles (e.g. Rulli *et al.* 2013) and policy briefs (e.g. GRID Arendal 2013). In the beta version of this database, launched in April 2012 (then called 'Land Matrix Database Number 1', see Anseeuw *et al.* 2012b), even among the data that were classified as verified and reliable, we were able to find a land deal attributed to a company that no longer exists (Svensk Etanolkemi AB, in short: SEKAB) and a land deal that is reported twice under two different names (AGRICA, formerly InfEnergy Co. Ltd). While these data have been updated in the re-launched version of the Land Matrix in June 2013, we still noted some tricky issues (see below).

The blurred picture of the land deal situation in Tanzania provides an inadequate basis for related political decisions and social actions and a misleading or at least unfavourable starting point for new research projects.[3] Further, as stated by Edelman (2013, 488), the spreading of inaccurate data threatens the legitimacy of activists relying on those data to campaign against land deals, and – as we argue – also the legitimacy of the research community and institutions

[3] The motivation for this article and particularly for the data compilation in the underlying LDPI working paper 31 came during a workshop where Locher met other scholars starting a research project in Tanzania. Locher realised that these scholars had spent considerable time and resources – like she had done before – to gain an understanding of the status of certain land investment projects in Tanzania in order to choose their case studies.

publishing such data. With this article we aim to give recommendations and stimulate consideration of appropriate data (re)production. We add to the debate on the methodologies used for investigating the global land rush in the following way: We provide insights into the challenges of data collection (related to the way the Tanzanian government handles land deals). We illustrate the difficulty of describing the status of land deals with a single term (as done in databases). We discuss biases related to information from investors' websites and media, and we elaborate specific flaws of data presentation and reproduction, such as inadequate citation, leading to a lack of traceability and further consequences. At the same time our work provides an update of the land deal situation in Tanzania and discusses the gap between announced and realized investments.

The article draws on a Land Deal Politics Initiative (see footnote 1) working paper (Locher and Sulle 2013) in which an updated compilation of land deals in Tanzania is presented in several tables. This compilation is based on a review of the literature and on our own fieldwork conducted in Tanzania between 2008 and 2013. We considered land leases by foreign investors with the purpose of agricultural production, be it for food or biofuels, or forestry plantations for timber and carbon credit trading. Deals for mineral extraction, conservation and tourism were not included[4]. As in the Land Matrix database, deals below 200 ha in size were not considered. Deals that involve exclusively domestic investors were not our initial focus; however, as we had gathered related data during the fieldwork, we presented some limited information on domestic land deals as well. In the following section we provide insights into the challenges of gaining information on land deals in Tanzania. We then highlight some of the flaws in the use of data so far and discuss their consequences. Thereafter, we present experiences from our own attempt of a careful data compilation. We conclude the article with some observations regarding the land deal situation in Tanzania and with considerations on adequate data presentation and traceable data reproduction regarding the land rush phenomenon.

Situation of foreign land deals in Tanzania

Tanzania is one of many African countries that have received investors from all over the world with the intention of obtaining long-term leases for several thousand hectares of land. The rise in interest in Tanzania's land and related concerns about the consequences for local people and the environment have been widely discussed, not only among academics (e.g. Mwamila *et al.* 2009, Sosovele 2010, Locher 2011, Mshandete 2011, Oakland Institute 2011a, Havnevik *et al.* 2012, Hultman *et al.* 2012, Nelson *et al.* 2012, Neville and Dauvergne 2012, Sulle and Hall 2013) and advocacy groups (e.g. Haki Ardhi/Land Rights Research and Resources Institute (LARRRI), Tanzania Natural Resource Forum (TNRF), Oxfam, ActionAid, WWF Tanzania, Legal and Human Rights Centre (LHRC), Lawyers' Environmental Action Team (LEAT), the platform Let's Talk Land Tanzania 2014), but also in Tanzanian political circles. A private motion tabled by the Member of Parliament Halima Mdee in November 2012 allegedly caused a hot debate in Parliament (Luhwago 2012a). The motion asked that Parliament direct the government to collect and provide up-to-date information on the

[4] While we are aware that land deals for mineral extraction, conservation, tourism and other purposes are also relevant and deserve scientific attention, our research in the last few years (and hence our collected data) has focused on the recent wave of land deals triggered by '"the triple-F crisis": food, fuel and finance' (Hall 2011b). Forestry investments were included due to their growing relevance in Tanzania in the same period.

amount of land transferred to foreign investors. In reply, the Ministry of Lands, Housing and Human Settlements Development (hereinafter referred to as the Ministry of Lands) declared that the government would thoroughly assess the situation and provide the requested data (Luhwago 2012b). At the time of writing, the government was yet to release the final report on this assessment; however, the main opposition party (Chama cha Demokrasia na Maendeleo, in short: CHADEMA) has already challenged the initial findings of the study (see below).

The process for foreign investors to acquire land in Tanzania is complex and lengthy. Non-citizens are not allowed to acquire land from villages (which falls under the category of Village Land) directly. A non-citizen investor has two options. He or she can obtain derivative land rights – that is a long-term lease of up to 99 years – from the Tanzania Investment Centre (TIC); but this rarely happens due to the limited scope of the TIC land bank. Alternatively, an investor can obtain granted rights of occupancy (long-term leases) from the Ministry of Lands. This usually requires a transfer of land from the category of Village Land to the category of General Land, which is a time-consuming process that can take several years. More details on how village land and general land gets into the hands of foreign investors are summarised in studies by Isaksson and Sigte (2009), Sulle and Nelson (2009), LEAT (2011), and Makwarimba and Ngowi (2012).

The challenges of collecting data on land deals in Tanzania

Lack of central government database

In Tanzania, various government institutions at different levels are involved in the land acquisition process, but it seems that there is no coordinated storage or exchange of data (Oakland Institute 2011a). When asked by the authors for data, representatives of national government offices often either referred to each other or told us to contact district offices, as accurate information would be available only there. In some cases we may have experienced limited cooperation on part of our interviewees. However, in many cases it appeared that the officials we approached were willing to help, but they themselves did not have a full understanding of the situation (field research by Sulle in 2008, 2009, 2011 and 2012 and by Locher in 2010, 2011 and 2013). Thus, Mdee's parliamentary motion, implying that the government, including the Ministry of Lands itself, currently has no clear overview on foreign land acquisition, mirrors the view held by the authors and by other researchers (Oakland Institute 2011a, 16, Haki Ardhi 2013).

This view is further confirmed by the fact that the Ministry of Lands commissioned the University of Dar es Salaam's economics department to conduct an assessment of ownership of farms – both domestic and foreign – on the Tanzanian mainland (unpublished report[5] cited in Mdee 2013), in an attempt to answer the above-mentioned parliamentary motion. According to information the contracted researchers received from the Ministry of Lands, only 10% of the total land in Tanzania has been surveyed and titled so far, making it difficult

[5] A draft report by the Department of Economics, University of Dar es Salaam, Tanzania, titled 'Consultancy services to conduct an assessment and evaluation of ownership of farms above 50 acres in Tanzania Mainland 2013' was made available to the authors, but is not publicly accessible. Although the results of this study were expected to be discussed in the parliamentary meeting of April 2013 (Luhwago 2012b), no report has been published yet. However, the Member of Parliament Halima Mdee referred to this study in her blog entry in May 2013 (Mdee 2013).

for researchers to identify the ownership of land plots.[6] This confirms the observation made by various researchers that unavailability of data is a concern. The situation might be partly explained by a staff shortfall in the Ministry of Lands as claimed in a report by the Food and Agriculture Organisation (FAO 2012) and by the fact that the 'Central Land Registry still operates largely as a paper-based system' (FAO 2012, 76).

The complexity and untransparency of the land deal process

The complex process of acquiring land adds to the challenge of gaining an up-to-date understanding of land deals in the country. Even if it could be assumed that the Ministry of Lands had all relevant data on investors holding derivative rights and rights of occupancy, the long process that investors must go through before obtaining such titles does not seem to be documented in a central institution. While the TIC is supposed to guide and support any investor in the land acquisition process, it cannot oblige investors to approach it. Many investors seem to approach district or village authorities without contacting the TIC beforehand. An example is the case of the New Forests Company, which allegedly became active in Kilolo District through contact with the district's Member of Parliament (interviews with district land official and several village leaders by Locher in 2011). The TIC is thus not aware of all ongoing investment processes. Yet, it would be important to know about investments in their early stages – not only for the sake of having the whole picture, but also because it seems to be a common practice among investors to start activities on their land before completing all of the paperwork (interviews with TIC and district land officials by Locher in 2010 and 2011). BioShape in Kilwa district, for example, went ahead with logging of natural forest found in the land allocated to it before securing a timber-harvesting licence from the Ministry of Natural Resources and Tourism (Songela and Maclean 2008, Sulle and Nelson 2009). The company was never held responsible for these activities, rather it was awarded a timber harvesting license and it established a sister company to process timber in Arusha (Sulle and Nelson 2013).

Flaws in the documentation and reproduction of data

As elaborated above, to a certain degree, misleading data might be unavoidable due to the changeable nature and lack of transparency of many land-based investments. However, inaccuracies are also created during the research and reporting process. Several flaws can be found in existing publications on land deals in Tanzania, related to both the documentation of primary data and their reproduction. In the following section we present the most common flaws and discuss their potential consequences. Though we quote existing reports for the purpose of illustrating our observations, we do not intend to criticise individual authors. Rather we seek to demonstrate by example the consequences of the lax standards in reporting of land deals that seem to have been established over the last few years.

Imprecise indication of status of land deals

The data that are provided in reports and databases are often insufficiently specific in terms of the stage of land acquisition. Some datasets do not distinguish between announced plans

[6] 'Unsurveyed land' means that the government has not conducted a proper legal designation of borders and has not registered the use and category of ownership for this plot. However, unsurveyed land managed under customary law can still be owned and considered legal property by Tanzanian citizens (Village Land Act, see URT 1999). Unsurveyed land cannot be allocated to foreign investors directly, but to domestic ones.

and initiated or completed land deals (e.g. GRAIN 2008, Land Matrix 2012). Others give indications such as 'planned', 'signed' or 'implemented' (e.g. in Görgen *et al.* 2009, Friis and Reenberg 2010). However, without a detailed description this information does not help us to understand the actual status of a land acquisition project. For example, investors might 'sign' an expression of interest (e.g. in village meeting minutes) and start to plant their crops ('implemented'), before having finalised the formal land acquisition process, thus not having any rights to this land according to state law. This example highlights the challenges of presenting a complex phenomenon in a generalised way with summarised short texts, as is often done in inventories of land deals.

One can argue that it is not relevant to distinguish between the different stages of a land deal if the intention is to demonstrate investors' interest in (Tanzanian) land (see also Anseeuw *et al.* 2013). However, when it comes to implications of land deals, there is a significant difference between a land deal that was merely announced and withdrawn before any action on the ground was taken, and an investment project that has been partly or fully realised. The precise information regarding the stage of a project can also be relevant for decisions on new research.

Whereas this first flaw is related to the specific content of a dataset, the two following issues concern scholarly practices of dealing with sources of data.

Presentation of data sources: aggregated and thus untraceable

One of the most common and significant flaws created by researchers is related to the documentation of data. While it is an established standard in academic literature to clearly and precisely provide the sources for presented data, in the – often grey – literature that addresses large-scale land deals it has become common practice to provide sources for information regarding land deals in an aggregated way. Information on multiple land deals is usually presented as a list of investors in a table or in small paragraphs. The sources for the data are then given as a whole for the total compilation, either at the bottom of the table or in the methodology (or another similar) chapter. The sources typically comprise empirical data collected by the authors from several sources as well as data from other literature. An example of such a table is provided in a report by the Oakland Institute (2011a, 17f), where the sources given at the bottom of the table include fieldwork, three government institutions and four earlier publications. Other examples are provided in Songela and Maclean (2008), Görgen *et al.* (2009), Mwamila *et al.* (2009), Sulle and Nelson (2009), and Kashaigili and Nzunda (2010). A recent publication by the FAO (2012) provides a table with partially outdated information on the 'status of recent investments' with the following weak citation: 'Compiled by authors from various sources' (FAO 2012, 77).

The practice of giving sources in an aggregated form creates problems. It makes the source of information and details regarding individual land deals difficult or impossible to trace. As a result, it is difficult to judge the quality of a single piece of information. For example, looking at such a table alone, it is impossible to know whether information on a given deal is recent and confirmed by the authors or whether it is based on one of the other indicated sources, which may be older or considered less reliable. It is also not possible to follow up the development of a land deal by contacting the same source of information or to triangulate the data by deliberately choosing a different source (as opposed to choosing it by chance, where

there is the risk that one could draw on the same source again). Another potential consequence of this practice is described in the following section.

Reproduction of data: incomplete citations

Publications that rely on data from earlier compilations (as described above) often cite only the authors of those compilations and omit the primary data sources. Examples include reports from the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ, formerly Deutsche Gesellschaft für Technische Zusammenarbeit GTZ; see Görgen et al. 2009), Kashaigili and Nzunda (2010) and the Oakland Institute (2011a). All of them rely to a certain extent on the IIED (International Institute for Environment and Development) report of Sulle and Nelson from 2009[7] and quote it accordingly, but they do not acknowledge the original sources of data which Sulle and Nelson give in their compilation, namely own fieldwork and information from three other publications: Kamanga (2008), Kulindwa (2008), and Songela and Maclean (2008). Also Sulle and Nelson applied this practice: they quoted Kamanga (2008) and the other authors in a table, but did not provide those authors' sources of information. For readers of the above-mentioned more recent publications (such as the GIZ/GTZ report), it thus appears that Sulle and Nelson collected all the given data themselves in 2009, while in fact the data stem from several sources, including the sources used by Kamanga (2008) and the other authors. Aside from issues related to the acknowledgment of intellectual property, this practice can imply that certain data are newer than they actually are. In the presented examples, the data are apparently from the 2009 IIED report (Sulle and Nelson 2009), whereas some of them are in reality from the three reports of 2008, on which Sulle and Nelson rely. Such a time difference, be it only one or two years, can be significant in the area of fast-moving land deals.

Another consequence is again – as for the problem of the aggregated provision of sources – related to the judgment of the quality of published sources. However, in the case of omitted sources it is even more critical, as the readers are not made aware that the given sources provide secondary data only. Readers are not provided the chance to judge for themselves, unless they are willing and able to scrutinise the quoted publications. Hence, readers might assume a certain quality that is not necessarily given. Later publications might quote sources that seem reliable, though they might be based mainly on weak data (for example when quoting the GIZ/GTZ report by Görgen *et al.* 2009, which is to a large extent based on media articles).

Misleading information: reporting of dead deals and duplication

As a consequence of methodological flaws – we argue – the Tanzanian literature contains several instances where land deals that have ceased or been aborted continue to be reported and where the same deal is reported twice.

The Oakland Institute report (2011a, 18) lists in its compilation of Tanzanian land deals the investor Korean Rural Community Cooperation (KRC) as having acquired 15,000 ha of land in Rufiji district[8] (in accordance with respective announcements in the media: TanzaniaInvest

[7] Görgen *et al.* (2009) do not explicitly refer to Sulle and Nelson (2009), but to Cotula *et al.* (2009), whose data for Tanzania are based on the data published in Sulle and Nelson (2009).

[8] In the Oakland Institute report (2011a) the KRC is named Korean Rural Development Cooperation, deviant from other sources that name it Korean Rural Community Cooperation. The publication provides some detailed and more

2009, Ng'wanakilala 2010, Rugonzibwa 2010). However, according to recent information from an official at the Rufiji Basin Development Authority (RUBADA)[9] the project had been based on a Memorandum of Understanding (MoU) only and no land was acquired. The MoU expired in August 2012 before the company had begun any operations aside from conducting a feasibility study. RUBADA is currently looking for a new investor for this area (RUBADA official, personal communication by Sulle in 2013).

Friis and Reenberg (2010), Kaarhus *et al.* (2010) and FAO (2012) all list a project from the Dutch company BioShape, which ceased its activities in Tanzania in 2009 and went bankrupt in 2010 (Chachage and Baha 2010, Valentino 2011). Of course, reporting the deal is justified, as there had been a land acquisition process and initial activities were implemented; implications for local people might still be relevant (particularly if the project is to be continued by a future new owner, see Valentino 2011). However, the way that the case is reported should not imply that the company BioShape is still active.

The Oakland Institute (2011a), probably referring to a figure obtained in Kaarhus *et al.* (2010), lists the Swedish company EcoEnergy (formerly SEKAB) as active in a process to acquire 200,000 ha in Rufiji District while according to indications from our sources (Rufiji District Natural Resources Officer interviewed by Sulle in November 2012, company manager interviewed by Locher in 2010, Agro EcoEnergy Tanzania Ltd 2013), the company – with full name Agro EcoEnergy Tanzania Ltd. – has been focusing on developing its land plots in the district of Bagamoyo since around 2010, and there do not seem to be more plans for securing land in Rufiji District at the time of writing. Nevertheless, news on the United Nations Research Institute for Social Development (UNRISD) website in November 2011 stated that 'SEKAB has already planted 20,000 ha in Tanzania's coastal region and has plans to expand this to 400,000 ha' (Chinweze *et al.* 2011, para. 6). The FAO publication of 2012 also mentions SEKAB as requesting 250,000–500,000 ha. This was after the company named 'SEKAB Bioenergy Tanzania Ltd' had ceased to exist and the activities had been handed over to Agro EcoEnergy Tanzania Ltd in October 2009. Agro EcoEnergy Tanzania Ltd founded a new company 'Bagamoyo EcoEnergy Ltd' in 2010 (Agro EcoEnergy Tanzania Ltd 2013, BRELA 2013). Further, according to our sources (see above), the project has planted a maximum of around 8,000 ha so far, if at all (not 20,000 ha). In Bagamoyo, the company has a maximum of about 8,000 ha suitable for sugarcane plantation and the rest of the 12,000 ha is expected to remain a buffer zone (district official interview by Sulle in 2012).

There is also a deal reported twice under different names: the Land Matrix in its beta version (Land Matrix 2012) reported the InfEnergy Company Ltd as a separate company from AGRICA; in fact the former is the earlier name for the latter (in both cases the local subsidiary is Kilombero Plantations Limited). In principle, InfEnergy changed its business plan, and thus its name, from oil palm for biodiesel production to the production of rice for local and international markets (Chachage 2012).

precise information about the investor's plans in a separate box on page 21; however, the information in the table suggests that said land is already acquired.

[9] RUBADA is a statutory organ, established in 1975, that manages several plots of land in the Rufiji Basin (Mwami and Kamata 2011:18).

Attempt at a careful compilation of land deals in Tanzania

In Locher and Sulle (2013) we provide an inventory of known land deals in Tanzania, compiled in a number of tables. Data in these tables are based on our own field research from 2008 to 2013 and on a thourough study of academic and grey literature. While we do not claim to present a complete picture of all information available, we have made considerable efforts to collect relevant literature from different sources, including from our interviewees from Tanzanian academia and NGOs.

This compilation differs from other reports in the following ways (for an illustration see *table 1*). First, the status of a land deal, if known, is indicated as precisely as possible. Second, where possible, information on the earlier legal status and use of the land in question in given. Third, as sources for our compilations, we used primary data only. We define these as data collected by an author or authors based on materials from involved government offices (e.g. Kaarhus *et al.* 2010 use a table on companies involved in biofuels by the Ministry of Energy and Minerals) or information from interviews with involved government officials, local key persons or representatives of the investing company, or direct observations in the field. Secondary data (data from reports quoting other publications) are not included in our tables. As a consequence, for example, the widely cited IIED report by Cotula *et al.* (2009) is not used for our compilation, as its information on Tanzania is entirely based on a then unpublished study by Sulle, commissioned by IIED, which was soon after released by Sulle and Nelson (2009) as an IIED report.

Often, the compilations of data in other publications do not allow the reader to distinguish the primary data from the secondary data easily (looking at the tables alone). In many cases it is possible, though, to draw assumptions about the primary data from the chapters on methodology (e.g. by considering the districts visited by authors). We generally also assumed that data from presented case studies were primary data. Further, we tried to identify the original data by filling in our tables in chronological order of publication dates (or dates of data collection), starting with the oldest reports. We could thus see which information provided by a more recent report was new and which information seemed to be copied from an older source. In the last column of our tables, we give the precise source of data for each land deal, and we refer to that source in a short version in brackets for detailed information in the other columns of the tables. This is particularly interesting in the case of contradictions. This procedure, though laborious and less easy to read, ensures that the given information is traceable.

Media reports proved to be an unreliable source and were only used exceptionally in our tables. Information from investors' websites is partly included, but needs to be treated with caution as well. The problem of bias in media articles has been reported elsewhere (see discussion below). Additionally we found that media articles often report the stated intentions of investors as if they were established land deals. The same applies to investors' websites. However, such announcements do not necessarily materialise as projected. Examples are the investor CAMS Agri-Energy Tanzania Ltd reducing its plans to acquire 208,000 ha, as announced in the media in 2008 (Obulutsa 2008), to 18,000 ha or even less (a plan which is as yet unrealised) and the investment plans of Saudi Arabian investors, reported by Reuters in 2009 (Karam 2009), which so far seem to remain just an intention. Green Resources AS, while having closed its subsidiary Tanga Forests in Pangani District in July 2012, was still reporting land acquisitions and plantations of 9,500 ha on its website in June

Table 1: Deals by foreign investors and joint ventures by Tanzanians and foreigners (extract for illustration)

No.	Investor (nationality, contact details)	Location (district)	Product and purpose	Acquired land and planned total size (ha)	Land status before acquisition	Status, business model, additional information	Sources of information
1	**30 Degree East** Partnership between Mauritian (holding 90%) and Tanzanian investor (10%) *Formally known as* **Sun Biofuels** owned by an investor from the UK *sold to the new investor probably in 2011*	Kisarawe	Jatropha for vegetable oil and biodiesel	**8,211** (*derivative right*: Sulle and Nelson 2009, Oakland Institute 2011a) **11,226** (*village negotiations*, Songela and Maclean 2008) **8,000** (Maltsoglou and Khwaja 2010, Kashaigili and Nzunda 2010) **9,000** (*granted, final stage of acquisition*, Bengesi *et al.* 2009, Mwamila *et al.* 2009) **9,000** *acquired* (LEAT 2011) *Requested:* **18,000** (Songela and Maclean 2008, Maltsoglou and Khwaja 2010, Oakland Institute 2011a) **50,000** (Bengesi *et al.* 2009, Mwamila *et al.* 2009)	Village land from 10 villages (LEAT 2011) 11 villages (Theting and Brekke 2010, Oakland Institute 2011a) Muhaga village provided 1,500 ha of their total 5,000 ha to the company (Theting and Brekke 2010)	*The following information is for the earlier company Sun Biofuels:* Plan to create 5,000 jobs (Bengesi *et al.* 2009, Songela and Maclean 2008) Compensation intended: just over 35,000 TSh/ha (Songela and Maclean 2008) Acquired 8,000 ha of land at a lease of 99 years. Work commenced on the clearing of land in June 2009 in preparation for planting. The company planted the first 600 ha of jatropha in November 2009 (Kashaigili and Nzunda 2010) Conflicts about compensation; salary above minimum wage, but questionable working conditions (Theting and Brekke 2010) Procedures of land acquisition not adhered to, manipulation; employment provided; access to land and water resources denied (LEAT 2011) Started in 2009, land not all yet planted (Oakland Institute 2011a) Jatropha plantation and envisioned out-grower scheme. The latter wasn't implemented until its collapse in 2011 (Haki Ardhi 2013) The company went bankrupt in early 2012. It has laid off overnight about 750 workers and failed to fulfil its socio-economic promises. The company was also reported to be in the process of selling its properties to new investor (The Guardian 2011) 'A British biodiesel company (…) The project was suspended in 2011, and sold to a new owner who is planning to continue with the investment. There has arisen a lot of issues on compensation for the loss of lands and assets on that land.' (Havnevik *et al.* 2012)	Songela and Maclean 2008 Mwamila *et al.* 2009 (fieldwork Jul/Aug 2009) Sulle and Nelson 2009 (Sulle field visit March 2009) Bengesi *et al.* 2009 (data from Ministry of Agriculture, Food Security and Cooperatives) Maltsoglou and Khwaja 2010 (source unclear) Kaarhus *et al.* 2010 (data from Ministry of Energy and Minerals, July 2010) Kashaigili and Nzunda 2010 (fieldwork) Theting and Brekke 2010 (fieldwork, probably in April 2010) LEAT 2011 (fieldwork in May/June 2011) Oakland Institute 2011a (fieldwork in Dec 2010) Carrington 2011 (media article in The Observer) The Guardian 2011 Havnevik *et al.* 2012 (fieldwork) Haki Ardhi 2013
2	**Africa Biofuel & Emission Reduction Company (Tanzania)**	Bihara-mulo	Croton megalocar-pus (*planned*)	**60,000** (Kamanga 2008)		Initial plan: plantation and collaboration with independent growers (providing them with education and technical support); but lack of funds, not operational, probably abandoned plans	Kamanga 2008 (field research, data from Ministry of Energy and Minerals, Ministry of Agriculture, Food Security

No.	Investor (nationality, contact details)	Location (district)	Product and purpose	Acquired land and planned total size (ha)	Land status before acquisition	Status, business model, additional information	Sources of information
	Ltd (Tanzanian, USA) Africa Biofuel & Emission Reduction (East Africa) Ltd (ABEA) www.africabiofuel.com Joint venture between TTT (Tucson Transatlantic Trade Holding Group, Inc) Wilma Biofuel and Emission Reduction Company, part of US Wilma (World Institute for Leadership and Management in Africa) Group and National Investment Company Ltd (NICO), Tanzania (Wilma 2006) Managing Director Christine Adamow P.O. Box 14317, Kagera		(Kaarhus *et al.* 2010) For biofuels and carbon credits	*Planned*: **20,000** (Songela and Maclean 2008)		(Songela and Maclean 2008) In 2008, the company won the World Bank Development Marketplace Award, a competitive grant program for innovative, early stage development projects (DM 2008) Acquisition under process, contracts expected in 2010 (Managing Director Christine Adamow, in a mail to Locher on 30 April 2010) According to a government official, the company was stopped by the Vice-President Office due to a land-related issue (Commissioner of Ministry of Energy and Minerals, interviewed by Locher in July 2012) TIC officials have no recent information about this company (TIC officials, interviewed by Sulle in Dec 2012) The company's website's latest news is dated Nov 2011; no clear information about status in Tanzania (ABEA website) Two mail requests in Nov and Dec 2012 to the Managing Director (by Locher) were not replied Registered in BRELA (2013) as incorporated on 11 Aug 2006	and Cooperatives) Songela and Maclean 2008 (probably based on interviews with government officials) Kaarhus *et al.* 2010 (data from Ministry of Energy and Minerals, July 2010) Mail contact by Locher with company's Managing Director Christine Adamow on 30 April 2010 Interview with Commissioner of Ministry of Energy and Minerals by Locher in July 2012 Officials of Tanzania Investment Centre (TIC) interviewed by Sulle in Dec 2012 Development Marketplace (DM) 2008 Wilma 2006 (investor's brochure) BRELA 2013

Source: Extract of table 1 in Locher and Sulle (2013, 7f), slightly adapted; sources for the information in the table: fieldwork by the authors and several publications providing primary data (see column 'Sources of information' for short indication and the reference list). Please note: Information is given as per December 2012.

2013, even though the land acquisition process was never fully completed and the plantations have been handed over to the district administration (interview with former Town Planner of Pangani by Locher in 2013).

Updated summary of large-scale land acquisition in Tanzania

After an extensive literature review, online research and fieldwork in several districts, we were able to update and improve the accuracy of information on large-scale land deals in Tanzania. However, there remain a high number of projects for which data are scanty. For many projected land deals it is still not possible to say whether they are only announced intentions, which might have been withdrawn already, or whether they are about to be realised in the near future.

Large differences between numbers of announced and realized land deals

Based on the tables in Locher and Sulle (2013) we make the following observations. A total of 62 land investment projects of foreign, domestic and unknown origins are listed; of these, only around 30% (18 deals) have reportedly concluded their land deals so far[10]. About half of the deals are so far only announced or with ongoing land acquisition processes, thus their fate is still unclear. 12 projects have been ceased. If we look at foreign investments solely and only consider the more reliable information, the ratio of the concluded out of the listed projects is 10 to 26; five projects have ceased (more detailed figures see below). Hence, the number of failed and not (yet) concluded land deal projects is high. The reasons for the abandoned or never-realized projects are mainly related to challenges during the land acquisition process (half of the listed projects). Investors face problems in acquiring the full amount of land they require, they encounter disputes around local land rights that cannot be solved within reasonable time or they do not agree with additional fees they would need to pay, e.g. for land use planning. The other major reason given is financial difficulty. This is sometimes intertwined with the costs and long duration of the land acquisition process, or investors claim general funding problems. Also for the announced or ongoing projects, of which the land deal is not concluded yet, major problems related to the land transfer are reported. This suggests that although foreign land deals in Tanzania are promoted by the government and much debated in the public and in academia, the realization of these investments faces challenges and is, so far, going on at a very limited pace and scope.

This also holds true for investments in the most prominent sector of recent land deals in Tanzania, those with the purpose of producing biofuels (mainly jatropha). Many of these projects, announced around 2005–2008 and reported in 2008 and 2009, have not become operational so far. Besides seven projects that we list as ceased or not having started the land deal process at all, we list 25 biofuel projects as (potentially) ongoing. However, the majority of them are reported by a number of studies (see Locher and Sulle 2013) to be having problems with funding or with the land acquisition process as outlined above, or there is only little information available even from the district officials, which might indicate that these land deals are not being persued yet or anymore. At the time of writing, we have indication of

[10] As we stated above, it is very difficult to get detailed information about the formal status of an individual land deal. Hence, our figures here are rather estimates, based on the indications we have. The actual number of legally concluded land deals might be even smaller, as according to our experience land deals are often reported as concluded before they actually are.

only one biofuel investment with an active plantation (30 Degree East in Kisarawe[11]). The global financial crisis of 2007–2008 and a poor understanding of energy feedstocks, among other reasons, have driven a number of companies such as BioShape Tanzania Ltd and Sun Biofuels out of business (Sulle and Nelson 2013).

Recent trends in land deals

As stated above, most of the biofuel projects, which consistuted the major part of the first wave of recent land deals in Tanzania and some other parts of the globe, have not been realized yet. Furthermore, there seems to have been little new interest in this sector in the past few years. The decreased interest can be ascribed to the limited economic viability of some envisioned biofuel crops and also to a lack of policy, institutional and legal frameworks in Tanzania (Hultman *et al.* 2012, Sulle and Nelson 2013). Our analysis shows that the most recent land-based investments mainly concentrate on food production, particularly rice, sugar and palm oil. Some of these projects have already become operational. We also observed that forestry plantations account for a considerable portion of approved land deals and planted area. As observed during our own data collection, apart from the production of soft and hard wood, investors in forestry plantations target additional income from carbon sequestration, so far mainly on the voluntary market, but also with the aim of getting registered under the Clean Development Mechanism (CDM), a climate change mitigation measure developed under the United Nations Framework Convention on Climate Change (UNFCCC). This corresponds to the analysis by Deininger and Byerlee (2011) on the rise of forestry plantations globally (see also Cotula 2012, 651, on his assumption that forestry projects might be under-represented in the Land Matrix – and probably also in other compilations, as we would assume). However, the largest forest investor in Tanzania so far, Green Resources SA, has closed one of its subsidiaries and might withdraw some of its other investment plans (interview with former Tanga Forests Ltd. Plantation Operations Manager by Locher in February 2013). Hence, the relevance of this sector in Tanzania remains uncertain.

Comparing land deals

Based on our analysis, the following estimates of the extent of land deals in Tanzania can be given. Land deals by foreign investors (and joint ventures between Tanzanian and foreign investors), whether announced, ongoing or concluded land acquisition processes, number 34 deals and amount to a total area of around 1,000,000 ha. However, of this amount, only 21 deals with totally around 555,000 ha are reported by at least two different sources and can thus be considered as verified with certain reliability. Information on the remaining area is based on one source only, or there is conflicting information from different sources. Of the verified deals, an area of 30,000 ha derives from three deals that are so far only announced (i.e. according to our sources, the land acquisition process has not been initiated yet). An area of around 380,000 ha derives from eight land deals with ongoing land acquisition. Of these, 325,000 ha stem from the AgriSol Energy deal; although its land acquisition process seems to be initiated (Oakland Institute 2011b), the deal seems contested and its continuation questionable (Ruhiye 2012). Finally, according to our analysis, 10 deals with a total area of 145,000 ha can be considered as concluded deals. These figures are lower than the comparable figures (i.e. land deals by foreign investors with indication 'land acquired' or 'concluded deal') presented in other recent compilations. The Oakland Institute (2011a, 17f) compiles 18 deals summing up to around 275,000 ha, GRAIN (2012) lists 10 deals with a total

[11] 30 Degree East has reportedly bought major shares of Sun Biofuels to develop biodiesel from jatropha (Locher and Sulle 2013). To-date, communities in Kisarawe still call the investor Sun Biofuels.

of 542,000 ha and the recent Land Matrix (2014) shows 28 deals amounting to 281,777 ha[12]. Although it can be assumed that some of the currently ongoing land deals will be concluded – and hence the figures of our compilation will get closer to what other databases present –, our analysis also shows that started land acquisition processes do not necessarily succeed.

Our compilation of ceased or aborted deals (table 4 in Locher and Sulle 2013) lists 12 projects[13] with a total area of around 300,000 ha. Around half of these projects had already started the land acquisition process; the others were just 'intended' investments. In addition to these are projects that had temporarily ceased all of their activities (regarding land acquisition and land-based investments) and been sold to other investors, and projects given up in a district, but continuing in another district, which are not included in this figure.

In addition to the land deals by foreign investors, investments of unclear origin amount to around 37,000 ha (seven deals), of which most are based on rather vague data sources. Domestic deals amount to approximately 20,000 ha for nine deals (tables 3 and 2 in Locher and Sulle 2013). It was not our original aim to focus on land deals by domestic Tanzanian investors. That is one reason for our table in Locher and Sulle (2013) on domestic deals being rather short. The other reason is that we included only deals above 200 ha in our inventory, and the size of purely domestic deals tends to be much smaller than deals involving transnational investors (for a list of domestic deals, see Bengesi *et al.* 2009, Mwamila *et al.* 2009, for a detailed overview of the Tanzanian owners of former National Agricultural and Food Corporation (NAFCO) farms and other land portions accumulated by local elites see Chachage and Mbunda 2009). This was also confirmed by the recent report produced by the University of Dar es Salaam for the Ministry of Lands[14] (cited in Mdee 2013), which focused on land deals above 20 ha. Although the average size of individual land deals by domestic investors is considerably smaller than the typical size of land deals by international investors, the number of domestic deals might be far higher than the number of transnational deals. Hence, in our view, this phenomenon deserves more public and academic attention in the near future.

Summarizing and discussing: how reliable are compiled data?

Widespread debates on foreign (and domestic) land acquisitions and their potential consequences are going on globally among academia, political circles and civil society, yet the question of reliable data on the phenomenon remains a major concern. Taking the example of Tanzania, we have shown that even after intensive research by many individuals and institutions, it is still not possible to provide a clear picture on foreign and domestic land deals. Besides illustrating the challenges facing researchers in accessing relevant information, we have presented a number of issues related to the presentation and reproduction of data on land deals.

[12] Our own figures (Locher and Sulle 2013) date from end of 2012; for better comparison with the Land Matrix figures one may consider the following: when we accessed Land Matrix data on 4 July 2013, the re-launched database listed 23 deals amounting to 285,000 ha. Figures in the earlier Land Matrix beta version were even higher.

[13] Projects of the same company in different districts are counted as one – if every (projected) land deal in every district is counted separately, the total figure of ceased or aborted deals amounts to 17 projects.

[14] See footnote 5.

In the case of several publications on land deals in Tanzania, sources are given in aggregated, incomplete and inaccurate ways. This is comparable to the 'reporting problem in databases' that Oya (2013, 509) found with the Land Matrix and the GRAIN compilation. The related problem of readers being unable to trace the original sources of information results in neglected quality checks, 'recycling of facts long after their sell-by date' (Scoones *et al.* 2013a, 475), hence reporting of ceased or never realized land deals, and double reporting of deals under different names. Thus, we have illustrated with examples from Tanzania that '"data" compiled in a "base", "set", or table has a way of assuming a credibility that may not be merited when its origins are examined more closely' (Edelman 2013, 495).

Another major problem is related to the strong reliance on media sources in research on the global land rush. Media reports, at least if taken alone, provide a distorted picture in many ways. In addition to the identified selection biases summarized by Scoones *et al.* 2013a (e.g. by host region and country, by investor country, by foreign vs. domestic origin, by scale; see also Borras *et al.* 2012b, Cotula 2012, Oya 2013), we assume that journalists focus on investments that provide exciting headlines, such as those that result in conflicts and protests. This bias, which could be called 'bias towards land deals with spectacular outcomes', might lead to an under-reporting of deals that draw less public attention, namely deals that create fewer conflicts or perhaps even positive outcomes for local people. We have further illustrated that in Tanzania's case, over-reporting not only happens through the tendency of media reports to round up figures on acquired land sizes (Friis and Reenberg 2010, Deininger and Byerlee 2011, 50), but also when media articles present investment projects as active, though they are just announced plans that might never be implemented.

More importantly, we found that announcements made by investment companies, labelled as a 'reliable source' in the Land Matrix' beta version (2012)[15], are of similarly poor reliability. There are not only investors that seek to conceal information on land deals from the public, but also companies that announce land investment projects as operational (possibly in an attempt to attract investors) when in fact these projects have either already ceased or the land deals have not been started yet. Thus, both media reports and information by investors contribute to 'under-reporting' and 'over-reporting' (Pearce 2013) of land deals alike.

The re-launched version of the Land Matrix database in June 2013 has considerably improved in several points. Yet, it continues to rest partly upon questionable sources such as media articles and research reports that do not include primary data, but are wholly based on other sources (e.g. Exner 2011). Hence, general statements based on a sum of entries in the Land Matrix (2014), such as for example on the total number of concluded deals, remain vague estimates on shaky ground.

While in this paper we have highlighted some methodological flaws in the way land deals are reported, we can only speculate about the reasons for these (at least for academic purposes) unusual practices. They might be partly ascribed to the challenges of getting information or related to the untransparent nature of the land rush phenomenon itself. The practices might also have to do with convenience and limited resources, as it is very time-consuming to report details of the deals and data sources as precisely as we propose here. Moreover, they might

[15] The description of the Land Matrix' reliability code 1 (out of a spectrum of 0–3) reads as follows: 'Land transactions reported in sources that we judge reliable including for example: research papers […], company websites […], government records' (Anseeuw *et al.* 2012b, 48).

also be related to the non-academic nature of many reports, which are produced by representatives of NGOs or development agencies, sometimes under considerable time pressure and with a significant preference for presenting their findings in pleasant readability. These reports often have the advantage of being published quickly and reaching a broad audience – an important point in this fast-moving field. Thus, some of these procedures might have been justified at the beginning of the land rush to quickly draw attention not only of activists, governments and the wider public through media, but also of concerned scholars (see also Scoones *et al.* 2013a). However, we argue, now it is high time to place emphasis on sound research based on empirical evidence.

A way forward

Future compilations of data on land deals?

We do not question the usefulness of compilations or inventories of land deals in general (in this point we agree with Rulli and D'Odorico 2013). If understood as an imperfect pool of existing information about the land deal situation, and not as unbiased and accurate representations of the reality, they might be helpful starting points for further in-depth research. In the absence of alternatives they might also, to a limited extent, provide a basis for political decisions and social actions, if consulted with due care. However, in any case, such compilations need to be drafted in a way that pays attention to the nature of the phenomenon and the related quality of the data.

Detailed information on processes, not simple figures

The recent land rush is far too complex to be captured by simple figures in simple lists. We agree with McCarthy *et al.* (2012, 523) that land acquisitions should be conceptually understood as a process with several stages (see also Anseeuw *et al.* 2013, 523ff, on different space-related ways of measuring large-scale land acquisitions, adapted from Chouquer 2012, and Scoones *et al.* 2013a, 475). This is not only necessary to distinguish between 'real' and 'virtual land grabbing'[16] as McCarthy *et al.* (2012) do; it is a basic requirement to gain a more nuanced picture of the land rush. In this article we have argued that in future work, researchers should pay more attention to acquiring detailed information on the status of land deals – information that is currently often vague or not available at all in compilations of land deals. Such information can contribute to a better understanding of the processes of land acquisition and the related behaviour of investors and other stakeholders. It is also potentially useful in interpreting contradictory data for a specific project. One of the major improvements to the re-launched Land Matrix database is the new option to provide information on each land deal's 'negotiation status' (with six different categories for intended, concluded and failed deals) and 'implementation status' (four categories from 'not started' to 'abandoned') (Land Matrix 2014). While this differentiation is welcome, some of the categories such as 'contract signed' still provide wiggle room, as we have illustrated. The provided information still needs to be read with care and needs to be defined more specifically for each national context and each entry.

[16] McCarthy *et al.* (2012, 523) define 'virtual land grabbing' as 'situations where, behind a façade of land acquisition for a stated purpose, there lies an agenda to appropriate subsidies, obtain bank loans using land permits as collateral, or speculate on future increases in land values'. They further state that '[i]n the case of "virtual grabbing" only a few initial stages of land acquisition or enclosure processes occur; just sufficient to enable specific actors to pursue their own interests, which may or may not depend upon land use changes actually taking place' (McCarthy *et al.* 2012, 523).

Further important information that is often missing in compilations of land deals is data on the earlier status of the land in question, in terms of property rights and usage. This is important if one wants to understand the decision-making process and the potential consequences at local level in a specific case. It is also crucial for gaining an overview of the patterns of land-use change induced by land acquisitions.

Traceable references to (good quality) primary sources

We propose a more rigorous documentation of data, which allows for the tracking of the primary sources of all the information given in compilations of land deals. Primary sources must be verified and checked for their quality, if possible. Traceble references to the sources are needed for every detailed entry in a list[17]. Though laborious and less user-friendly, this is the only way in which compilations can serve as appropriate databases that support further research and political and social responses.

The new version of the Land Matrix (2014) has considerably improved on the first version, by providing direct online links to the sources for information about each land deal in the database. However, contrary to what was announced by Anseeuw *et al.* (2013), the database does not provide the exact source for each single piece of information (i.e. the land size, the status of the land acquisition process, the investment purpose). Hence, while the database provides the possibility to retrace the sources for each entry, it places the responsibility of checking the data's quality on the user. The appropriate use of the database thus requires a well-educated and well-informed user, willing to invest a considerable amount of time. This is problematic, as many data users are inclined to make use of what is accessible without being able and/or willing to check the primary sources in each case. Therefore, it is crucial that the Land Matrix and other existing databases are constantly fed with data that are as reliable and accurate as possible. Further, database providers are responsible for publishing statements about the data's quality with the intention of making database users aware about important limitations, not just 'disclaimers […] covering the authors' hindquarters' (Edelman 2013, 497).

Concluding remarks

In sum, in this article, while acknowledging the challenges of representing a phenomenon as untransparent and dynamic as the global land rush, we propose a more specific, precise and rigorous way of collecting, presenting and reproducing data in order to improve the quality and detail of information. Our analysis, distinguishing between verified and unverified information and between announced, ongoing, concluded and ceased land deal processes, points out that the amount of unverified information is still considerable, the completion of announced and ongoing land deal processes is in many cases uncertain, and the relevance of domestic land investments is widely unknown. Academics and policymakers must realize that the knowledge about the land deal situation in Tanzania is still less clear than suggested by certain databases and needs further investigation. Improved research practices could help in representing the trend of large-scale land acquisitions more credibly and in using the resources of researchers and activists more effectively in order to tackle the urgent concerns related to the global land rush.

[17] The compilation on land deals in Tanzania by Exner (2011, 131ff), though based on secondary information, is a good example regarding the exact provision of sources for detailed entries in a table.

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